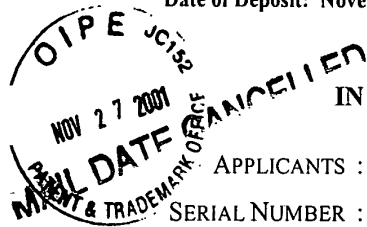


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Attorney Docket No.: 23239-504 NATL (Arch-4)



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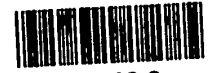
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANTS : Breaker et al.  
SERIAL NUMBER : 09/830,905 EXAMINER : Not Yet Assigned  
FILING DATE : October 29, 1999 ART UNIT : Not Yet Assigned  
FOR : Multidomain Polynucleotide Molecular Sensors

BOX IDS

Assistant Commissioner for Patents  
Washington, D.C. 20231



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PATENT TRADEMARK OFFICE

TRANSMITTAL LETTER

Transmitted herewith for filing in the present application are the following documents:

1. Information Disclosure Statement (1 page), in duplicate;
2. Modified Form 1449/PTO (2 pages), in duplicate;
3. Copies of cited references A1-A12, B1 and C1-C43; and
4. Return Postcard.

If the enclosed papers are considered incomplete, the Mail Room and/or the Application Branch is respectfully requested to contact the undersigned at (617) 542-6000, Boston, Massachusetts.

The Commissioner is authorized to charge any additional fees that may be due, or to credit any overpayment, to the undersigned's account, Deposit Account No. 50-0311 Ref. No. 23239-504 NATL (Arch-4). A duplicate copy of this transmittal letter is enclosed herewith.

Respectfully submitted,

*Ivor R. Elrifi*  
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Dated: November 6, 2001

TRA 1575357v1

Express Mail Label No.: EL831676067US  
Date of Deposit: November 6, 2001

Attorney Docket No.: 23239-504 NATL (Arch-4)

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT(S): Breaker et al.  
SERIAL NO.: 09/830,905  
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INFORMATION DISCLOSURE STATEMENT

Applicants hereby make of record the documents listed below and on the attached modified Form PTO-1449 (submitted in duplicate) in the above-identified application, copies of which are submitted herewith. This Information Disclosure Statement is being filed before the first Office Action on the merits in the above-identified case. Accordingly, no fee or certification is required as set forth in 37 C.F.R. § 1.97. A copy of each of the references is enclosed unless otherwise indicated on the attached Form PTO-1449 (modified). Please charge any fees that may be due, or credit any overpayment of same, to Deposit Account No. 50-0311 Reference No. 23239-504 NATL (Arch-4).

Respectfully submitted,

*Ivor R. Elrifi* Reg. No. 48,573  
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Dated: November 6, 2001

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PTO/SB (12-97)  
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Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Modified Form 1449/PTO

INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT

(use as many sheets as necessary)

Application Number	09/830,905
Filing Date	10/29/99
First Named Inventor	Breaker
Group Art Unit	Not Yet Assigned
Examiner Name	Not Yet Assigned
Attorney Docket Number	23239-504 NATL (Arch-4)

## U.S. PATENT DOCUMENTS

Exam Initials	Cite No.	U.S. Patent Document No.	Issue Date	Name of Patentee(s) or Applicant(s)	Class	Sub Class	Filing Date If Appropriate
	A1	US 5,190,931	03/02/93	Inouye			11/15/89
	A2	US 5,208,149	05/04/93	Inouye			04/10/92
	A3	US 5,272,065	12/21/93	Inouye et al.			06/21/90
	A4	US 5,474,911	12/12/95	Pontius			11/30/90
	A5	US 5,589,333	12/31/96	Bagasra et al.			04/11/94
	A6	US 5,637,459	06/10/97	Burke et al.			08/02/94
	A7	US 5,712,375	01/27/98	Jensen et al.			05/03/95
	A8	US 5,723,289	03/03/98	Eaton et al.			09/20/94
	A9	US 5,723,592	03/03/98	Eaton et al.			06/05/95
	A10	US 5,763,177	06/09/98	Gold et al.			09/16/94
	A11	US 5,763,566	06/09/98	Jensen et al.			05/03/95
	A12	US 5,773,598	06/30/98	Burke et al.			06/05/95

## FOREIGN PATENT DOCUMENTS

Exam Initials	Cite No.	Foreign Patent Document Office Number	Name of Patentee(s) or Applicant(s)	Date of Publication	Translation Yes No
	B1	WO 98/27104	Yale University	06/25/98	

## OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Exam Initials	Cite No.	Name of Author, Title (when appropriate), Publication, Volume, Page(s), Date, Etc.
	C1	Araki, M. et al. (1998). <i>Nuc. Acids Res.</i> <u>26</u> : 3379-3384.
	C2	Breaker, R. and Joyce, G. (1994). <i>Trends in BioTech</i> <u>12</u> : 268-275.
	C3	Breaker, R. (1997). <i>Chem. Rev.</i> <u>97</u> : 371-390.
	C4	Burgstaller, P. and Famulok, M. (1994). <i>Angew. Chem. Int. Ed. Engl.</i> <u>33</u> : 1084-1087.
	C5	Burgstaller, P. et al. (1997). <i>Nuc. Acids Res.</i> <u>25</u> : 4018-4027.
	C6	Cane, D. et al. (1998). <i>Science</i> <u>282</u> : 63-68.
	C7	Draper, D. (1996). <i>Trends in BioTech.</i> <u>21</u> : 145-149.
	C8	Fedor, M. and Uhlenbeck, O. (1992). <i>Biochemistry</i> <u>31</u> : 12042-12054.
	C9	Forster, A. and Symons, R. (1987). <i>Cell</i> <u>49</u> : 211-220.
	C10	Gerstein, M. et al. (1994). <i>Biochemistry</i> <u>33</u> : 6739-6749.

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Exam Initials	Cite No.	Name of Author, Title (when appropriate), Publication, Volume, Page(s), Date, Etc.
	C11	Gold, L. et al. (1995). <i>Annual Rev. of Biochem.</i> <b>64</b> : 763-797.
	C12	Hellinga, H. and Marvin, J. (1998). <i>Trends in BioTech.</i> <b>16</b> : 183-189.
	C13	Hertel, K. et al. (1992). <i>Nuc. Acids Res.</i> <b>20</b> : 3252.
	C14	Jenison, R. et al. (1994). <i>Science</i> <b>263</b> : 1425-1429.
	C15	Koizumi, M. et al. (1999). <i>Nature Struct. Bio.</i> <b>6</b> : 1062-1071.
	C16	Kuwabara, T. et al. (1998). <i>Molecular Cell</i> <b>2</b> : 617-627.
	C17	Lin, C. and Patel, D. (1996). <i>Nature Struct. Bio.</i> <b>3</b> : 1046-1050.
	C18	Lin, C. and Patel, D. (1997). <i>Chemistry &amp; Biology</i> <b>4</b> : 817-832.
	C19	Long, D. and Uhlenbeck, O. (1994). <i>Proc. Natl. Acad. Sci. USA</i> <b>91</b> : 6977-6981.
	C20	Marsden, A. et al. (1998). <i>Science</i> <b>279</b> : 199-202.
	C21	McDaniel, R. et al. (1995). <i>Nature</i> <b>375</b> : 549-554.
	C22	Osborne, S. and Ellington, A. (1997). <i>Chem. Rev.</i> <b>97</b> : 349-370.
	C23	Patel, D. et al. (1997) <i>J. Mol. Bio.</i> <b>272</b> : 645-664.
	C24	Porta, H. and Lizardi, P. (1995). <i>Bio/Technology</i> <b>13</b> : 161-164.
	C25	Pyle, A-M. and Green, J. (1995). <i>Curr. Op. in Struct. Bio.</i> <b>5</b> : 303-310.
	C26	Robertson, M. and Ellington, A. (1999). <i>Nature Biotechnology</i> <b>17</b> : 62-66.
	C27	Ruffner, D. et al. (1990). <i>Biochemistry</i> <b>29</b> : 10695-10702.
	C28	Sassanfar, M. and Szostak, J. (1993). <i>Nature</i> <b>364</b> : 550-553.
	C29	Serra, M. and Turner, D. (1995). <i>Meth. In Enzymology</i> <b>259</b> : 242-261.
	C30	Soukup, G. and Breaker, R. (1999). <i>Trends in BioTech.</i> <b>17</b> : 469-476.
	C31	Soukup, G. and Breaker, R. (1999). <i>Proc. Natl. Acad. Sci. USA</i> <b>96</b> : 3584-3589.
	C32	Soukup, G. and Breaker, R. (1999). <i>Structure Fold. Des.</i> <b>7</b> : 783-791.
	C33	Soukup, G. and Breaker, R. <i>Ribozyme Biochemistry and Biotechnology</i> ; Eaton Publishing 2000. pgs. 149-170.
	C34	Tang, J. and Breaker, R. (1997). <i>Chemistry &amp; Biology</i> <b>4</b> : 453-459.
	C35	Tang, J. and Breaker, R. (1997). <i>RNA</i> <b>3</b> : 914-925.
	C36	Tang, J. and Breaker, R. (1998). <i>Nuc. Acids Res.</i> <b>26</b> : 4214-4221.
	C37	Tuschl, T. and Eckstein, F. (1993). <i>Proc. Natl. Acad. Sci. USA</i> <b>90</b> : 6991-6994.
	C38	Tyagi, S. and Kramer, F. (1996). <i>Nature Biotechnology</i> <b>14</b> : 303-308.
	C39	Von Ahsen, U. (1998). <i>Chemistry &amp; Biology</i> <b>5</b> : R3-R6.
	C40	Werstuck, G. and Green, M. (1998). <i>Science</i> <b>282</b> : 296-298.
	C41	Westhof, E. et al. (1996). <i>Folding &amp; Design</i> <b>1</b> : R78-R88.
	C42	Williams, K. and Bartel, D. (1996). <i>Nuc. Acids and Mol. Bio.</i> <b>10</b> : 367-381.
	C43	Ye, X. et al. (1996). <i>Nature Struct. Bio.</i> <b>3</b> : 1026-1033.

\* a copy of this reference is not provided as it was previously cited by or submitted to the office in a prior application, Serial No. \_\_\_\_\_, filed \_\_\_\_\_, and relied upon for an earlier filing date under 35 U.S.C. §120 (continuation, continuation-in-part, and divisional applications).

Examiner Signature		Date Considered	
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EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered.

Include copy of this form with next communication to applicant.

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